

Le Verrier in this work. In 1872 the meteorologists of the departments of Hérault, Gard, Lozère, Aude, and Pyrénées-Orientales combined to appoint a meteorological committee for the western Mediterranean region; Prof. A. Crova was the general secretary of the committee. Each of these departments established stations with the necessary apparatus, and according to the original plan the observations were to be collected and published annually, together with the memoirs and discussions. Eventually all documents were to be deposited with the president and secretary of the committee. A public subscription was opened for the purpose of collecting funds for the support of the stations and the work. In August, 1873, the General Council of Hérault voted an appropriation for the printing of the meteorological bulletin of Hérault, and this has been continued annually. In 1879 the former commission was replaced by the meteorological commission of Hérault, established under the auspices of the Minister of Instruction for the Republic. This commission continued the work on thunderstorms started by its predecessor, and originated numerous other works under the direction of its president, Professor Crova. In 1881 Professor Crova was called to occupy the chair of physics in the National Agricultural School at Montpellier, and has utilized this favorable position to develop this organization of the meteorological observatory. In 1885 Professor Houdaille succeeded Professor Crova as professor of physics and director of the meteorological station. In 1888 the faculty of science was authorized to incorporate the laboratory, archives, and library of the meteorological commission with the collegiate department of physics. Therefore, the latter is now installed in a spacious locality adjoining a garden, where one can make experiments in the open air, uninfluenced by the vicinity of dwellings. The total amount of material accumulated in these volumes is very considerable, and the general index greatly facilitates the use of the data by students. Prof. M. Chassant temporarily fills the place of Professor Houdaille, who was attacked by a severe sickness in 1901. The general table of contents is divided into the following four sections:

1. The general alphabetical index by subjects, 18 pages.
2. Systematic index of subjects, 11 pages.
3. Author index, 15 pages.
4. List of plates and illustrations, 17 pages.

This is followed by a bibliography of those connected with the meteorological work of the department covering 58 names of persons or institutions, among whom Crova appears to be the most active.

The bulletins for the years 1902 and 1903 have been edited by Prof. Maurice Chassant, who conducts the course in meteorology and geology at the National School of Agriculture. This college, therefore, may be classed among those in which meteorology is associated with geology rather than with geography or with physics, as is done in many other cases.—C. A.

TORNADO IN MOBILE COUNTY, ALA.

[Reported by Albert Ashenberger, Observer, Mobile, Ala.]

On the afternoon of May 30, 1904, a tornado with a typical funnel-shaped cloud occurred in Mobile County, about 12 miles west of the Mobile Weather Bureau station.

The morning weather map of that date showed an area of low pressure central over eastern Arkansas and overlying the lower Mississippi Valley, with an extension of the depression merging with another low area over the lower St. Lawrence River. The accompanying rain area was characterized by numerous thunderstorms, and it was coextensive with the barometric depression.

The day's weather conditions at Mobile were marked by three thunderstorms. The sky was partly covered with clouds until 10 a. m. and was overcast with lower clouds afterwards. The winds were from the south and southwest and of light to fresh velocity. The temperature was normal. A high relative

humidity obtained, the percentage recorded at both observations being among the highest during the month. The barograph shows no marked sudden changes; the pressure [reduced to sea level] fell almost steadily from 29.90 inches, at 9 a. m., to 29.76 inches, at 2:45 p. m., then the fall was less rapid and 29.75 inches was registered at 4:45 p. m., at which time a sudden fall of .02 inch occurred; this was followed by a stationary period of two hours and then a steady rise.

At Melton's farmhouse, five and one-half miles from the beginning of the storm track, the projecting top of the chimney was prostrated, and the roof of the kitchen, 50 feet south of the main building, was carried 60 feet in a northeasterly direction. This house did not indicate any sudden atmospheric expansion, as the sashes of a window facing the east were blown inward. About half a mile beyond Melton's house is the end of the path, marked by four prostrated trees. An occupant of the house stated that light rain fell at about 3:30 p. m., and thunder was heard and lightning observed in the southwest. At about 4 p. m. a violent commotion in the intensely dark clouds in the southwest was observed, and then the funnel-shaped cloud, like the smoke from a locomotive, was seen approaching, sometimes descending to the earth, and again receding. In a few moments the tornado passed with a heavy, roaring noise, like an approaching train. No lightning was observed in the cloud, but after the tornado had passed lightning was observed in the southwest, thunder was heard, and light rain fell. Rain amounting to .36 inch fell at Mobile from 4:07 p. m. to 6:05 p. m.

Mr. Leonard Lane observed the storm from the porch of his house, which is about one hundred yards to the right of the tornado's track, and about a mile from its beginning. He stated that the whirl was about two hundred yards in diameter, and the upward spiral movement from right to left was plainly discernible from the flying tree branches and other debris, and the rotating mass while passing his house had the appearance of an immense dry whirlwind without any low moisture-laden clouds.

The width of the path of the storm was not well defined, but near Mr. Lane's place, as stated by him, it was 200 yards; at Melton's place the prostrated fences indicated a width of about three hundred and fifty yards. The estimated value of the property destroyed is \$200.

The time used in this report is ninetieth meridian.

HAILSTORM AT PUEBLO, COLO.

[Reported by J. P. Slaughter, Observer, Pueblo, Colo.]

On May 20, the worst hailstorm in the history of the city was experienced. Hail fell from 3:40 to 4:15 p. m., seventy-fifth meridian time. The ground was nearly covered with lumps of ice, ranging in size from $\frac{1}{4}$ to $2\frac{1}{4}$ inches, with an average diameter of about 1 inch. Some of the hail is reported to have been 9 to 10 inches in circumference, weighing 4 to 6 ounces. The hail is known to have covered a strip about 6 miles wide, and extended from a point about 8 miles west of this city to an unknown distance to the northeast. There was nothing unusual in the character of the storm except the size of the hailstones.

Damage to windows, fruit, and crops of all kinds will run far into the thousands.

EARLY AMERICAN WEATHER RECORDS.

In the report of the Maryland and Delaware section for May, 1904, Dr. Fassig has reprinted a letter dated February 27, 1755, written by Dr. Richard Brooke, of Prince Georges County, Md., communicating a record of maximum and minimum temperatures as observed with a Fahrenheit thermometer in September, 1753, to August, 1754. Dr. Brooke also says, "I have seen an account of the weather kept by a friend in Philadelphia which agrees with mine."